

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the above-identified application:

Listing of Claims

Claim 1 (Currently Amended): An image search method of searching for a desired image from a plurality of images stored in storage means, comprising:

a designation step of designating an arbitral region in an image;

the a setting step of setting a weight value in correspondence with a property of feature amount used in similarity calculation of the image in units of segmented regions obtained by segmenting the image into a plurality of segmented regions, based on a size of the designated arbitral region included in the segmented region;

a first calculation step of dividing a designated search source image and each of the plurality of images stored in the storage means into the plurality of segmented regions, and performing similarity calculation in units of the segmented regions to obtain similarity for each of the segmented regions between the designated search source image and each of the plurality of images stored in the storage means;

the a second calculation step of calculating image similarity between a designated search source image and each of the plurality of images on the basis of a feature amount of the designated search source image, a feature amount of each of the plurality of images, the similarity for each of the segmented regions calculated in the first calculation step and the weight value set in the setting step; and

the an acquisition step of acquiring an image as a search result from the plurality of images on the basis of the image similarity calculated in the second calculation step.

Claim 2 (Canceled).

Claim 3 (Original): The method according to claim 1, wherein
said method further comprises the drawing step of allowing an operator to
interactively draw an image, and

the search source image is the image drawn in the drawing step.

Claim 4 (Canceled).

Claim 5 (Currently Amended): The method according to claim 4 1, wherein the
second calculation step comprises ~~segmenting each of two images as processing targets into a~~
~~plurality of segmented regions, performing similarity calculation in units of segmented~~
~~regions using the feature amount, and a step of calculating, integrating results obtained in~~
~~units of segmented regions, weighted similarity based on the similarity calculated in the first~~
~~calculation step and with the weight set in the setting step, and integrating the weighted~~
~~similarities for the segmented regions~~ to obtain the image similarity.

Claims 6-7 (Canceled).

Claim 8 (Currently Amended): The method according to claim 1, further
comprising ~~the~~ a display step of displaying an image representing the image acquired in the
acquisition step as the search result.

Claim 9 (Original): The method according to claim 8, wherein the display step
comprises displaying a thumbnail image of the image acquired in the acquisition step.

Claim 10 (Original): The method according to claim 8, wherein the display step
comprises displaying an icon image corresponding to the image acquired in the acquisition
step.

Claim 11 (Original): The method according to claim 8, wherein the display comprises, when one of displayed images is selected, displaying details of an image linked to the image.

Claim 12 (Original): The method according to claim 8, wherein the display step comprises displaying extracted images in an order of similarities.

Claims 13-15 (Canceled): The method according to claim 2, wherein the setting step comprises setting the weight in units of attributes of a color space.

Claim 14 (Original): The method according to claim 13, wherein the setting step comprises setting different weights for a feature amount representing luminance and a feature amount representing a color difference.

Claim 15 (Original): The method according to claim 14, wherein the calculation step comprises executing similarity calculation using feature amounts corresponding to a YcbCr color space and integrating obtained results with the weights to obtain the similarity.

Claim 16 (Original): An image search apparatus for searching for a desired image from a plurality of images stored in storage means, comprising:

a designating means for designating an arbitral region in an image;

a setting means for setting a weight value in correspondence with a property of feature amount used in similarity calculation of the image in units of segmented regions obtained by segmenting the image into a plurality of segmented regions, based on a size of the designated arbitral region included in the segmented region;

a first calculation means for dividing a designated search source image and each of the plurality of images stored in the storage means into the plurality of segmented regions, and performing similarity calculation in units of the segmented regions to obtain similarity for

each of the segmented regions between the designated search source image and each of the plurality of images stored in the storage means;

a second calculation means for calculating image similarity between a designated search source image and each of the plurality of images on the basis of a feature amount of the designated search source image, a feature amount of each of the plurality of images, the similarity for each of the segmented regions calculated by the first calculation means and the weight value set by said setting means; and

an acquisition means for acquiring an image as a search result from the plurality of images on the basis of the image similarity calculated by said second calculation means.

Claim 17 (Canceled).

Claim 18 (Original): The apparatus according to claim 16, wherein

said apparatus further comprises drawing means for allowing an operator to interactively draw an image, and

the search source image is the image drawn by said drawing means.

Claim 19 (Canceled).

Claim 20 (Currently Amended): The apparatus according to claim 16, wherein said second calculation means ~~segments each of two images as processing targets into a plurality of segmented regions, performs similarity calculation in units of segmented regions using the feature amount, and calculates~~ integrates results obtained in units of segmented regions, weighted similarity based on similarity calculated by said first calculation means and with the weight set by said setting means, and integrating the weighted similarities for the segmented regions to obtain the image similarity.

Claims 21-22 (Canceled).

Claim 23 (Original): The apparatus according to claim 16, further comprising display means for displaying an image representing the image acquired by said acquisition means as the search result.

Claim 24 (Original): The apparatus according to claim 23, wherein said display means displays a thumbnail image of the image acquired by said acquisition means.

Claim 25 (Original): The apparatus according to claim 23, wherein said display means displays an icon image corresponding to the image acquired by said acquisition means.

Claim 26 (Original): The apparatus according to claim 23, wherein when one of displayed images is selected, said display means displays details of an image linked to the image.

Claim 27 (Original): The apparatus according to claim 23, wherein said display means displays extracted images in an order of similarities.

Claims 28-30 (Canceled)

Claim 31 (Original): A storage medium which stores a control program for causing a computer to realize processing of searching for a desired image from a plurality of images stored in storage means, said control program comprising:

a code of a designating step of designating an arbitral region in an image;

a code of the a setting step of setting a weight value in correspondence with a property of feature amount used in similarity calculation of the image in units of segmented regions obtained by segmenting the image into a plurality of segmented regions, based on a size of the designated arbitral region included in the segmented region;

a code of a first calculation step of dividing a designated search source image and each of the plurality of images stored in the storage means into the plurality of segmented regions,

and performing similarity calculation in units of the segmented regions to obtain similarity for each of the segmented regions between the designated search source image and each of the plurality of images stored in the storage means;

a code of ~~the~~ a second calculation step of calculating image similarity between a designated search source image and each of the plurality of images on the basis of ~~a feature amount of the designated search source image, a feature amount of each of the plurality of images,~~ the similarity for each of the segmented regions calculated in the first calculation step and the weight value set in the setting step; and

a code of ~~the~~ an acquisition step of acquiring an image as a search result from the plurality of images on the basis of the image similarity calculated in the second calculation step.

Claim 32 (New): The method according to claim 1, wherein in the setting step, the weight value for each segmented region is set based on a ratio of the designated arbitral region to the segmented region.

Claim 33 (New): The apparatus according to claim 16, wherein said setting means sets the weight value for each segmented region based on the ratio of the designated arbitral region to the segmented region.

Claim 34 (New): An image search apparatus for searching for a desired image from a plurality of images stored in storage means, comprising:

a designation unit configured to designate an arbitral region in an image;
a setting unit configured to set a weight value in units of segmented regions obtained by segmenting the image into a plurality of segmented regions, based on a ratio of the arbitral region to the segmented region;

a first calculation unit configured to divide a designated search source image and each of the plurality of images stored in the storage means into the plurality of segmented regions, and perform similarity calculation in units of the segmented regions to obtain similarity for each of the segmented regions between the designated search source image and each of the plurality of images stored in the storage means;

a second calculation unit configured to calculate image similarity between a designated search source image and each of the plurality of images on the basis of the similarity for each of the segmented regions calculated by said first calculation unit and the weight value set by said setting unit; and

an acquisition unit configured to acquire an image as a search result from the plurality of images on the basis of the image similarity calculated by said second calculation unit.